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The BULLETIN of the National Institute for Architectural Education invites submission of manuscripts, news items and notes from students and professionals. The reports of the competitions are presented in the BULLETIN as unofficial opinions of the authors and should not be interpreted as the collective opinion of the evaluating jury. Moreover, the N I A E cannot be held to account for any statements or opinions printed in magazine.

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National Institute for Architectural Education

1960-1961 REVISED SCHEDULE OF AWARDS AND SCHOLARSHIPS

<u>Title</u>	<u>Date and Duration</u>	<u>Award</u>	<u>Eligibility</u>	<u>Evaluation</u>
1960 September 12 and January 9, 1961				
Frozen Jazz	any consecutive 10 days	Emerson Memorial Prize—\$150	Elementary	January 1961
A Living Memorial to Jules Verne	any consecutive 10 days	Architectural Record Prize—\$100	Intermediate	January 1961
A Hub for a Galactic World	any consecutive 3 days	Kenneth M. Murchison Prizes—\$200, \$100	Advanced	January 1961
1961 January 9 and April 23				
A Sculptural Climber for a Children's Zoo	any consecutive 10 days	Oswald Hoepfner Memorial Prize—\$100	Elementary	May 1961
A Conceptorium for the Allied Arts	any consecutive 10 days	Hirons Alumni Prize—\$200	Intermediate	May 1961
U. S. Pavilion for the World's Fair	any consecutive 3 days	"Test-Run" Scholarships for Lloyd Warren Finals Two of \$500 each	Advanced	May 1961
SPECIAL COMPETITIONS 1961 January 9 and April 23				
A Repetitive Refreshment Stand for World Fair Grounds	any consecutive 10 days	Committee of Stainless Steel Producers, American Iron & Steel Institute Prizes—\$800, \$600, \$400	Intermediate and Advanced	May 1961
Exhibit Building at the 1964 New York World's Fair	any consecutive 10 days	Tile Council of America Scholarships Two of \$500 each	Intermediate and Advanced	May 1961
THESIS AWARD 1961		\$1000 Summer Foreign Travel Fellowship	Completed by June 1961	June 30, 1961
1961 LLOYD WARREN FELLOWSHIP—48th Paris Prize in Architecture				
Preliminary Competition	January 27, 1961 for 3 days following	(Consult Circular)	(Consult Circular)	February 1961
Final Competition	March 1 for 5 weeks following	Fellowship Awards and Regional Prizes	(Consult Circular)	April 1961

SCHOLARSHIPS AND AWARDS

Lloyd Warren Fellowship, Paris Prize in Architecture. First Prize—\$5,000; Second Prize (First Alternate)—Scholarship of \$3,500; Third Prize (Second Alternate)—Scholarship of \$250; Eight Regional Prizes of \$100 each. For qualifications consult description of fellowship in this circular.

“Test-Runs” for Lloyd Warren Competition: Two Scholarships of \$500 each with privilege to participate in final competition for Lloyd Warren Fellowship in 1962. Recipients of scholarships must be able to meet eligibility requirements for the fellowship other than that of a degree.

Architectural Record Prize. The Architectural Record Magazine has made the sum of \$100 available for prize awards.

Emerson Memorial Prize. This prize amounting to \$150 has been made possible by a legacy left to the NIAE by William Emerson, and is given to commemorate his staunch support of the NIAE educational program.

Kenneth M. Murchison Prize. First Prize—\$200; Second Prize—\$100. This award was created by the Society of Beaux-Arts Architects (1896-1941) to commemorate the memory of their camarade Kenneth M. Murchison.

Hirons Alumni Prize. Prize—\$200. The Alumni of Atelier Hirons have established this award in commemoration of the training and fine spirit of “camaraderie” instilled by their patron and teacher Frederic C. Hirons.

Oswald Hoepfner Memorial Prize. Some friends of Oswald Hoepfner, Sculptor (deceased 1957), donated monies in his memory which is being awarded this year on a problem embodying a sculptural theme.

THESIS AWARD. This award is made for outstanding achievement in a thesis submission at the end of the school year. The theses are entered by the schools for the award. The 1961 award is a \$1,000 Summer Foreign Travel Fellowship.

SPECIAL COMPETITIONS

Tile Council of America, Inc. Scholarships. Two scholarships will be awarded for the Tile Council of America, on a special competition conducted for these awards. Those eligible for these scholarships are students in the 3rd, 4th and 5th years and graduates of 1958, 1959. The scholarships are \$500 each.

Committee of Stainless Steel Producers, American Iron and Steel Institute are sponsoring prizes on a special competition to be conducted in the Spring of 1961. The competition is open to all students in the 3rd, 4th and 5th years and to graduates of 1958, 1959. First Prize—\$800; Second Prize—\$600; Third Prize—\$400.

BY STEPHEN A. KLIMENT

Cliches, so Webster tells us, are "stereotyped plates"; they are also, Webster continues, "trite phrases" and "hackneyed expressions". The latter part of the definition suffers from the fact that it seems to apply the derivation of the printer's term solely to the art of speech and literature; and it stresses the unfavorable sense in which it is widely held.

There are cliches, for instance, in painting. From the uninformed they are concealed; they know little about color, tone or composition; tricks and touches and clever effects tried a thousand times before are for them blithe discoveries. A painter may use such tricks with effect; whether as self-expression or with an eye to the market is a secret between him and his soul. If it is self-expression and if by all critical standards he is still not a very good painter, those in the know stay away and the gullible pay his grocer's bills. And if it is done with an eye to the market, it is no longer art, but production, like so many pins or shoes or lamp sockets.

By way of music and sculpture we arrive at architecture, where the field for the cliché is monumental - if I may be excused the unhappy pun - because lack of discrimination is so widespread and the rewards of a calculating play on the cliché ability of the uninformed are so great. Pre-modern architecture had, to be sure, its own failings in this direction: trite little tricks of tracery in a late Gothic window; certain repetitions of decorative motifs in the Mannerist palaces; and the architectural signs and countersigns of the baroque and rococo. But these had about them a certain human touch; cliché hardly seems the word to describe them, because a cliché, our "stereotyped plate", is so much more properly identified with the machine, that source of immeasurable quantities and total sameness. So that when the modern house came to be described as a "machine to live in", the cliché came into its own.

Now it is easy to confuse "cliches" with "style". It has been said that style is made up of a collection of cliches, and as definition of style the phrase is witty perhaps, but a little misleading. A cliché is a consistently similar way of treating a window, or an entry, or a wall full of windows, or a wall; of piercing a wall to allow access of light to the rooms of achieving texture; of detailing a corner; of laying out an interior; of organizing circulation; of relating

building to ground; of setting up a geometry of stone joints. But add these up, and you still do not have a style, because there are fifty ways of treating a window in a consistently similar way, and a hundred ways of achieving characteristic textures. Combinations and variations based on all these elements are infinite in number, but in the end they are really no more than so many different structural or aesthetic systems. They do not necessarily constitute a style.

Style - and we have no Style to-day - is a single system, composed of the most characteristic - and, often enough, the most widespread - cliches in each aspect of architecture, and it is, furthermore, adhered to by the great majority of architects. It is seen then that a cliché has in it the seed of style; it may therefore be a Good Thing, granted that Style is preferable to Non-style, and thus Order to Disorder. Therefore the crux of the matter is this: is a cliché good for architecture, and if so, to what extent?

The very brilliant architect will shun a cliché simply because it offends his status as an artist. If he were to resort to it nevertheless, it would be because he sees in it an element of Style, a component of Order, a step in Continuity; but more often he will forestall it by devising forms which in turn are eminently clichéable.

The competent architect has quite a different relationship to the cliché. To him, the tolerable cliché - meaning one which, stripped of its derogatory context, is still acceptable form - is something which is admittedly not original; but it has been tried, and found to be generally pleasing. He understands its limitations as original form, but recognizes its role as a settler following in the wake of the pioneer. It is the next best thing to original genius, and worth a whole world of frantic innovation.

The relationship of a third category of architects, and of most builders, to the cliché is that of a businessman to his product: if it sells, put it on the market. It is here that the uninformed layman makes his mistakes. An old Bohemian proverb states that among the blind he with one eye is King. And the layman being blind, has no way of telling whether his King is a mediocre one with one eye or a competent one with two, and turns to the one who campaigns the loudest. Here Webster's definition comes into its

own. The cliché is debased; it becomes an idle substitution of gimmick for basic design principles.

A discriminating public, a critical public of eighteenth century discernment, will see the cliché in its proper perspective; it will recognize the legitimate use of, say, an Ed Stone masonry screen, but it will rebel as soon as this reaches the wrong hands and appears about the land in the most grotesque applications. But our public is too tolerant, and the only cure for that is re-education, not only for the public, but for the builder too, and first and foremost for that architect-to-be, the student. How is this to be done?

It is, I think, safe to say that the cliché stems mainly from a divorce from fundamentals. There is nothing more embarrassing than to see Wright wrong and Mies misunderstood. These knew why they built as they did, Wright subconsciously, Mies rationally. Every student cannot be a Mies, still less a Wright; but by analyzing their work, he will arrive at the underlying principles which make them, and all great architecture, live. Materials, structure, color, texture, rhythm, economy of means, profile, plan. This is the core. Everything that follows is synthesis. There is always the danger that a competent but unimaginative student will take example for law; most students have their idols, and this is reflected in their early design. It has always amused me to listen to the symphony by Bizet, an early work composed when Bizet would have been a junior in college, which has movements successively resembling Mozart, Beethoven and Berlioz. But if the fundamentals, the means, are correctly assimilated, this stage of development is outgrown, the idol is cut to size, and the individual's own personality emerges. He has found himself. If he fits the category of competent, then his training will prevent the flagrant abuse of architectural forms. The genius recognizes no limitations. And the third category, the practitioners of the cliché for what it will bring, are incorrigible unless the consumer public thins their ranks by discriminating more.

Smith, about to hire an architect, ought to be taking in an architectural journal and have attended a course in architecture at the museum; or perhaps he needs a good architect with a big stick of a personality; he will, in due course, turn into to-day's perfect client, one with an intelligent interest in architecture and the willingness to let the professional do the job. Unluckily there is always Brown, who doesn't really care, so long as his building meets certain functional and economic requirements; but then Brown, perhaps, is a lost cause.

As for the Public at Large, the Man in the Street, who

will never in his life hire an architect, what of him? Our suburbs are overwhelmingly his creation, as he buys up by the thousands those heterogeneous bundles of clichés which his builder complacently calls "homes". The builder, a businessman, sells houses to make a living, and if clichés sell houses, clichés he will build. While it is obviously overoptimistic to try to have every house in the nation designed by an architect - delightful as such a Utopia would be - surely it is not too much to ask every potential buyer of a builder's house to educate himself in the field of architecture, to develop a certain taste and critical outlook in this field, and to cut the umbilical cord tying him to the builder's offerings. Cost is obviously no factor here, as anyone knows well who has seen the simple European peasants' cottages or the well-proportioned brick houses of old Virginia.

The cliché is not only a question of aesthetics; it is also a social phenomenon. There are Joneses in this world to keep up with; this leads to Fashion and Fads, and from Fads to Clichés is only a step. The cliché thrives on fads; it breeds on its own popularity like certain lower animals which feed on their young and thereby acquire new vigor. The arresting thing about it, when compared with a literary cliché, or a musical one, or even one in clothing, is its permanence and obtrusiveness. The cliché will obsolesce: if it was literary, it remains on the bookshelf; if musical, it stays unplayed; if clothing, it is consigned to an obscure closet. But the architectural cliché becomes part of the landscape, and it will tell the story of the caliber and imagination of its architect and the taste of its owners long after these have passed away.

Lastly, the cliché can be examined as a purely economic phenomenon. As such it is characteristic of our day: a manifestation of uniformity, it is grist for the mill of mass production. What is more profitable than making ten thousand identical components of a Stone screen than to make one hundred thousand. It is of course important not to confuse the cliché with prefabrication and with mass production of building parts. A cliché results from a composition of parts, and there is no use in blaming some perfectly good mass produced components for a hackneyed whole. Furthermore, since cliché implies a repetition of identical processes, it stands to reason that it brings down labor costs, by doing away with time required by workmen to become familiar with new processes.

In concluding this study of the cliché in architecture, it may be well to review the good in it, and the bad. Spontaneity, its very antithesis, is generally recognized as a good thing, having the connotation of freshness, originality and courage. But too much sponta-

(concluded on page 6)

neity leads to license, repeated originality loses its originality, and courage cannot take the place of control. So that just as spontaneity is not all white, the cliché is not all black. The cliché does follow a road towards Order and Style, although admittedly it is not the shortest road, nor the most eventful. It affords a competent but not unusually inventive designer the tested means to achieve certain ends, means which in his hands may still look like a cliché to the exacting critic, but which may in due course form a part of good architecture. This is not a defense of the cliché, which by absolute standards of integrity is not defensible, but merely points out that we, having no more genius to go around than any other age, need more good architecture and fewer attempts at great architecture. We need the Schools of Architecture more than ever to instil the fundamentals, which alone will enable the student and the emerging architect to fulfill their basic obligation: to select wisely, and to reject unmercifully. And seen from this point of view, the cliché will remain what it has always been: something to be created by the gifted, used by the competent, and abused by the rest of us.

THREE NEW CLASSIC ORDERS
in
ARCHITECTURE

as represented in

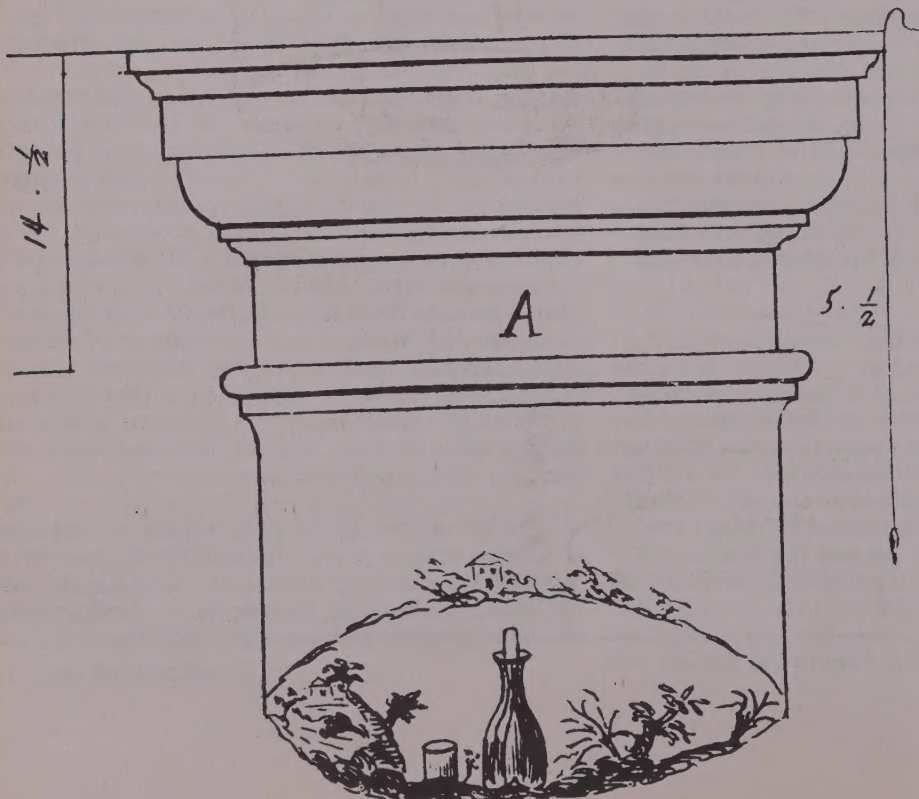
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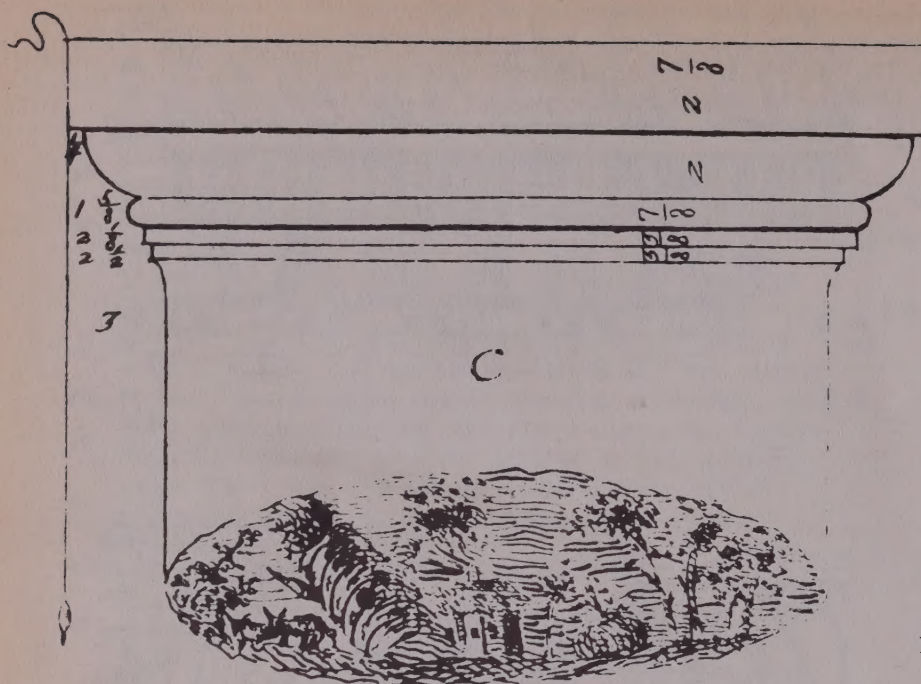
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VINO T^o XIX



PASTORAL T^O XLII

VITRUVIUS GO HOME !

BY REYNER BANHAM

(Reprinted by courtesy of "Architectural Association Journal" of 34 Bedford Square, WC 1, London; of an address at the Ordinary General Meeting held on Wednesday 27 January 1950.)

I am not an architect. I have never designed a building, not even a small one. I stand before you as a pure consumer. I am somewhat abashed by the distinguished company here present, but not too abashed - I feel slightly Khrushchevian. The big battalions are on my side. There are nearly 50 million of us and only 18,000 of you. If at any time we decide that we have had enough, we can reduce you to amateur status more or less overnight.

But I would not like that to happen. I like architects as a class of people. They have been getting in my hair since I was no size. They have formed a big part of my life and of what, I suppose, I should call my formative years, and I would not like to see them disappear from the face of the earth. I like the idea of architects, of there being someone skilled in the creation of human environments. I like even more the idea of modern architects, the idea of there being people skilled in the creation of what Bob Heller, of

ATV, calls "Places where you are proud to be a twentieth century man." I asked 'Which places?' and he replied, 'There is Gatwick Airport, and then there is ... er...' I know what he meant!

This devotion to the idea of modern architects goes back a very long way in my life. If I can find an incident where it can be considered as starting, it was hearing a radio talk on the last of my old man's 'Do it yourself' superhets, with all the works exposed - it was a noble piece of machinery. Out of it one day came a talk which, I think, I am correct in attributing to Geoffrey Boumphrey about the need for modern architecture and why we should have modern architecture. His concluding ploy, which affected me deeply at the time, was to say 'You do not want an old-fashioned house any more than you would want an old-fashioned motor car.' How times have changed!

(continued on page 9)

That really impressed me enormously, I felt that architects, unlike the practitioners of the other arts, were really 'with it'; they really lived in the twentieth century. Music had got about as far as Schoenberg, which meant that musicians had just about caught up with the Crystal Palace. Painters were still doing pictures in square frames and all that old stuff. Novelists were writing in French, Anglo-Irish and other dead languages. I really felt that architects alone were on the ball.

When I finally came up to London after the war, I felt that if I could get to know architects, I would really meet with an on-the-ball class of people. What did I find? There was the Casson Rolls-Royce of unknown antiquity, the Cubitt Rolls-Royce of almost equal antiquity, and the Howell Renault of goodness knows what antiquity, the famous vehicle which on one occasion forced him to write in the London County Council late book, 'Car seat exploded' the air having come out of the air cushion and he had sunk below the level of the dashboard.

Furthermore, there were men who were apparently modern and who claimed to be up-to-date architects, who were building in a nineteenth-century manner using red brick, red for political reasons, apparently - the so-called William Morris revivalists, with whom I had many long and bitter arguments.

It was for me a very weird situation indeed. These people professed to be modernist and yet seemed frightened of the twentieth century and frightened of the problems of living in it. It IS a weird thing, but the words of abuse about the modern world which are invented by professional jeremiahs like Jolly Jack Priestley stay in circulation among architects far longer than any other section of the community.

Architects are the only people nowadays who use words like ADMASS. It has gone right out, elsewhere. Architects alone kept on using words like BORAX, and, as we know from direct aural experience, still worry about things like the Beat Generation. The only two people whom I have never heard with my own ears quote Richard Hoggart's book 'The Uses of Literacy' with approval, were both architects. This collective gloom struck me always as a strange situation, which needs something between historical examination and psychiatric treatment.

One feels that here is a body of men who are the victims of some kind of occupying power, that they are under the influence, that they are in a sense possessed by a dead spirit which prevents them quite getting to the places where they would like to get.

I wondered for a long time who it was and who was the quisling who let it in. I shall speak plainly, now, but this is intended absolutely straight and level. It was not until re-reading Sir John Summerson's introduction to Trevor Dannett's recent book that I discovered who the man was. Discussing the MARS Group exhibition of 1938, he says that 'the Vitruvian values of commodity, firmness and delight which Godfrey Samuel ingeniously proposed as the theme of the exhibition were spotlighted on the new Burlington scene.' So we know who it was in both senses. We know our occupying power and we know the man who let him in. This is an odd document, because Sir John's approach is a little cautious, as befits a fellow professional of mine, an art historian, but he says - you'll observe 'values' not 'virtues'. One senses some feeling of the intrusion of alien standards of judgment.

And when I look over what has been said and written in various places, it is not simply that I am using Vitruvius loosely to stand for a body of residual academic thinking - It is Vitruvius quite specifically. Staying in the Summerson country for the moment, there was his very distinguished talk at the RIBA some years back on the possibility or plausibility of the idea of the theory of modern architecture. In the discussion afterwards, England's leading Vitruviast - I think I can properly call him that - Mr. W. A. Eden, picked up some of the things Sir John had said, and asserted: 'If I have understood him aright - that the programme provides the principle of unity in modern architecture and that this is a new principle - it is on this point that I must differ from him. Read Aristotle or Vitruvius or Alberti on the planning of the city. Read Vitruvius on the planning of the house according to the needs of the various grades of society ... Space, immediately we begin to plan it, is not just something neutral. There is in every plan a most important space, and the most important element of accommodation must be put in that most important place.'

With all due respect, I suggest that that is not what Sir John had said or meant; that the idea of a programme brought forward by Sir John was of a general functional brief, a general directive to the architect, not in the nineteenth century Beaux-Arts meaning of the word - a schedule of accommodation. If you have a schedule of accommodation, with rooms of various sizes, you can probably, in correct technical terminology, so COMPOSE your building that the most important space is in the most important place. If, on the other hand, you have a purely functional brief, your most important functional volume

will HAVE to be, the most important place wherever you put it, and the rest of the plan will have to sort itself out and fit itself around.

It is the double use of the word 'programme' which is the interesting point at issue here more than the Vitruvian reference. Architects who pride themselves on dealing strictly with visual matters are more susceptible to words and word-plays than probably any other section of the community. If it is the same word - if it says 'function' or if it says 'programme' - it must mean what it meant the last time one heard the word.

I can pursue this sort of theme nearer home, getting at the same time a little more generalised, to give a broader picture of the occupying power in action. For instance, in Colin Rowe's review of the last exhibition of student work, there occurs this passage:

'Possibly the fourth year -'

(I do not know why people pick on the fourth year for abuse) -

'was a little too much at a loss in its replanning of Westminster too committed to a futuristic aesthetic and too frightened of the apparatus of the Baroque city to create any really memorable specimen of urban order.'

If this passage means anything, it means, apparently, that the only way to create memorable specimens of urban order is in some way to use Baroque planning techniques. The evidence of one's eyes and of one's memory suggests that this is not in fact so. On the other hand, I suspect that Colin Rowe has a point here in that most architects do not know any alternative order; that at the back of their minds as a last resort there is always axial planning. If you cannot think how else to do it, you can make an axis and line things up on it or around it.

As I say, this is a more generalised example of the same kind of thing and I will now generalise a bit more to pick up a piece of what I call residual academic thinking from a recent "AA Journal." I repeat, this stuff is intended on the straight and level as meat for debate and carries nothing personal. This is from a piece on 'Structures'. I quote.

'This demands strength and rigidity of structure. Strength is not enough; permanence of shape is just as important. All materials 'give' under load. Those which have most inherent rigidity are chosen as structural materials, leaving only special uses

for the highly deformable though very strong materials like rubber. But even structural materials give a little under load and we can demand no more from our structures than a certain controlled degree of rigidity.

A viseostatic structure is defined as one which for ordinary practical purposes and also under ordinary observation is to all intents of constant shape whether loaded or not.

A structure is, then, a suitable force transmitter when it is both strong enough and of suitable shape and proportion to satisfy the viseostatic requirement.'

In other words, structures will be taught on the basis of a special case which is admitted not to exist. It says that all structures give under load, but the teaching will proceed from the kind of structure that does not give under load. Admittedly, you have to teach structures somehow, but it seems to me that it ought to be possible to approach the problem of teaching structures from the most general -- that is to say, from the proposition that all structures give - and to proceed from there, to introduce, rather than the absolute standard of the imaginary structure that does not give, the idea of tolerance, the structure that just does not give too much (which is, in fact, the ordinary engineer's approach). However, it may be that engineers are 'out' again - fashions change so rapidly between lunchtime and teatime here that one cannot always keep up with where one was in the conversation.

I have simply given you three examples of the kind of thinking which is persistent in architecture and which, I think, will persist while there is nothing to replace it. As a consumer, however, I think that I have a right to ask for something better, to ask for some kind of approach which stands nearer to the common practice of thinking today.

It is a weird situation that a profession entrusted with the spending, and the direction of spending, of millions of pounds should exist apparently in a kind of cultural vacuum, using mental techniques which, in most fields, went out with Leonardo da Vinci. What I am asking for is a professional practice based on an approach which is of our time; that if people propose to be modern architects, they should dispose of mental techniques which are not paralysed by the Vitruvian occupation but are free to manoeuvre, free to operate, in the conditions in which we find ourselves at the present time. What I am asking for, in fact, is a professional practice based firmly on real scientific knowledge.

By 'real scientific knowledge' I mean scientific knowledge as a scientist would recognise it. There is a wonderful superstition which circulates, particularly among architects and among abstract aesthetes, that anything is scientific if it has maths in it. The literature of modern architecture is speckled with this idea all over. Probably the worst offender in this respect is Corb, who persistently uses the word 'scientific' when he means simply mathematical, done with numbers. About every eighteen months, there is an outburst of correspondence in the LISTENER on 'the scientific method'. The scientist makes statements which seem to him perfectly obvious. Then, members of the Society of Jesus write back proving not merely that he is morally wrong, but, what is worse, he is logically wrong. At the end of the argument, what the scientist said usually turns out to be factually true, and so much the worse for logic.

But the point was made last time this correspondence broke out by, I think, Professor Otto Frisch that maths (which is a branch of logic) is not science, but is simply one of the tools of science. This basis of modern science is observation, experiment. We recognise the emergence of modern science in the generation of Sir Christopher Wren, called at that time 'the experimental philosophy', which, unlike the earlier philosophy which relied upon receiving antique opinion, was now proposing to find out what really happened, and then to use maths as a means of codifying the results, sorting them out and making some kind of order out of them.

It seems to me that somehow or other, the whole body of architecture has got to be manoeuvred on to this basis, because it is probably the only way of closing the existing gap between the architect as the man who claims to control a holistic discipline, between the architect who practises one sort of mental discipline and handles one sort of ideas, and literally everybody else involved in the building who handles completely different sets of ideas.

Between the various structural men and services' men, and so on, there is a homogeneity of opinion and method. They are all, so to speak, tech-men. But the one outsider in the team remains the architect, who is an arts man in the common or Cambridge sense of the word. While it stays like that, you will get the recurrence of embarrassments such as those in one part of the 'Structures' article, where there is a passage about the need for a platonic affair between technique, on the one hand, and aesthetics, on the other hand.

This probably begins to sound like a re-statement of the grand old tradition of functionalism, the grand

old principle of rationalism, that if the building is properly put together, if it serves its purpose and works, it will look beautiful. I cannot think how this idea still manages to circulate on the evidence of some of the functional buildings put up during the high period of what Mrs. Moholy calls the gangling era of functionalism. It is not a position which I would support, because it manifestly does not work. I am not in this instance siding with, so to speak, the routine anti-functionalists who moan and groan about buildings merely fulfilling demands of mere necessity. I am simply taking the great functionalist theorists at their face values and wondering why their buildings so often turn out unsatisfactorily.

I am not suggesting that if you get the functional side right, the aesthetic side will sort itself out. We know that that does not happen. What I am proposing is really something more subversive and, I think, more unpopular - that is, that the aesthetics themselves should be put on the same experimental and scientific basis as the rest of the design of the building. It is no use just telling Vitruvius to go home. If you cast out one devil, there is always the risk that X-dozen others will come and occupy his place. The attempted abolition in the 'twenties of academic aesthetics without proper substitutes for them simply let the ideas back in again at the 1938 MARS Group exhibition.

It is essential to put something solid and substantial something which is real in terms of the bulk of thinking being carried out at present, in the place of the exhausted body of traditional aesthetics. It seems to me that this can be done, but that the risks facing architecture may be serious. It is a question of whether architects are men enough to undertake the manoeuvre. Quite a lot of architects realise that factual examination of the effect of spaces, colours, levels of lighting, acoustics, etc. on people, may produce results which directly counter some of the most deeply cherished ideas about colour, space, and so on, that architects entertain.

Attempts have been made, of course, to produce such a scientific aesthetic in the past. The two most important ones, I suppose, include that of the ESPRIT NOUVEAU Group in Paris in the early 'twenties. They, unfortunately, picked the wrong scientist. They picked Charles Henry, the man who was trying to prove that the academic theories were scientifically correct and they were left with the proposition that the proof that certain colours have reliable physiological effects was the effect of a red rag on a bull. That was their last point of defence in a small footnote at the bottom of a page, but it was also the nearest thing to an observed fact.

There was also a later try at the Bauhaus when Gropius and the handicraft connection moved out. There was a brief period when Hanneslueger tried to produce a scientific aesthetic and then understandably failed, because the sheer body of necessary research had not then been done.

But the situation is different now. The research is proceeding. It has had to proceed for a variety of reasons, medical, commercial and otherwise. A body of information is beginning to pile up. It is possible to hand a really massive collection of footnotes to an article by, say, Llewelyn Davies all referring to solid experiment and solid theoretical interpretation of those experiments on the subject of what buildings really do to people. The information is beginning to be there. If it is not very available, there is, I think, one simple reason; that is, that architects are not asking for it.

There is a great mass of material in the scientific papers in most of the scientifically progressive countries of the world. It can be got at through the usual cross-indexing and abstracting systems, but the architectural profession at large is not asking for the information. It appears to be quite satisfied with its body of horse and buggy aesthetic theories and the alleged aesthetic facts which it has inherited from a tradition going back to Vitruvius, if not further.

As I say, the results of all this may be extremely disturbing. What little I have seen of the results of direct aesthetic research nearly always appears at first sight complete nonsense to the person with the normal kind of aesthetic training. Or else it seems only too obvious. The material I know best refers to two-dimensional art - and shows, for instance, that there is a direct relation between the lightness and the darkness of the picture and the psychiatric condition of the person looking at it. Surprise! But what is nice is to have it sorted out properly in figures and the proper curves of normal distribution drawn to show how it fits together.

On the other hand, you get the completely wild stuff - for instance, that in direct contradiction to all the existing body of theory, it is blues that appear to advance and reds that appear to recede; and also, apparently, it is blues that make people feel cheerful and reds that make them feel depressed. You can try this on every Espresso bar in London which is based obviously on the exactly opposite theory.

The stuff is there. It badly needs interpretation and application in practice. No one in the architectural profession outside the hallowed confines of Nuffield Lodge seems to be doing anything with it; but it must be done, and I cannot think of a better sort of organization than a progressive school to do it. What I suspect is that if it is not done here at the AA School, it will be done in the next few years at another place further up Gower Street, now under completely new management.

The results will be completely unpredictable. We do not know what this stuff does to architects. We do not know what kind of effect it has on the business of designing buildings. It requires, in the first place an extensive moral reshuffle. Architects will have to give up their pretensions to run the world and to put everybody in order. You know the quotation, 'No, we have not drawn anything yet, Mr. Jordan, but we have pretty well decided how people should live.' This is, after all, the architect's time-honoured approach - 'I am the captain of the building team from a hereditary divine right of kings and nobody will push me out.'

This approach may well have to go. If you start to enquire what really happens, you will also have to start enquiring what people really want. It is not necessarily the same as they think they want or what architects think they ought to have, but simply what people need. One would have to get on all fours with all 48 million of us, with the consumers, and find what the consumer is expecting and how he thinks he will get it.

Furthermore, the application of the experimental information in practice is liable to bend a great number of time-honoured aesthetic preconceptions, but we do not know for certain whether it will. Some may very well survive. The house designed completely according to a scientific aesthetic might conceivably turn out like the Farnsworth House, but, guessing from where we stand, it might equally well turn out looking not unlike the restoration of Downing Street. One literally cannot tell.

One cannot say that under scientific discipline there will be 'Other' architecture which will differ from existing architecture in the following formal ways: it will have wavy roofs instead of flat roofs, small windows near the floor instead of large ones near the ceiling, or something like that. There are too many imponderables involved for us to guess ahead.

It is perfectly conceivable that when the shade of Vitruvius has been chased out and replaced by what

is, to me, a healthier and a saner discipline, architecture might remain looking exactly as it does at the moment. The moral improvement would be that it would look like that for reasons which a person like myself, with a technological rather than an aesthetic background, could support, approve and understand.

DISCUSSIONS

Mr. Raymond Erith

It seems to me that architecture started to go wrong about a couple hundred years ago, when it began to be what we call academic. What we mean by 'academic architecture' really is the architecture of those people who are a great deal better at the theory than they are at the practice, architecture which is therefore a bit out of balance, especially in the sense that it is impractical.

I do not want to say anything against academies, but I must admit that the architects who first began to get their architecture out of balance in this way were those who learnt and taught in the academies at the end of the 18th century and at the beginning of the 19th century: that is to say, the leaders of the profession rather than the rank and file.

I find it interesting and instructive that at the time when important architects like Wilkins were designing their apparently purposeless and tomblike structures, the small-town architects and builders — who managed to keep themselves in fashion but, obviously, they had never had any proper education, or what would have been thought of as proper education — still could design beautiful and sensible little buildings which were as charming and intelligent as the academic ones, while the buildings of their betters were stupid. The thing really did not become impossible until the Ecole des Beaux Arts invented something which was so wildly impractical that everybody reacted and has been reacting ever since.

We reacted, but I do not think that the reaction has got rid of the trouble. I agree with Dr. Banham, because in the case of the reaction itself I think the reason is different. The trouble with the reaction is that it was itself academic. That is only natural, because we live in an academic age. Nearly all our education is academic and it is, therefore, natural that our outlook should be academic, because we have nearly all been students of academies of one sort or another. It seems odd, but there really is a difference between a man who was a student taught by someone whose main business it was to instruct and a man

who was a pupil or an apprentice who learnt from a man whose main business it was to practise.

Sir John Summerson

The lecturer a short time ago referred to me in the Press as a retired propagandist for modern architecture. He was dead accurate! I would like to tell you the circumstances under which I retired.

Some years ago, I gave a talk at the RIBA about the possibility of the theory of modern architecture, a talk to which Dr. Banham referred earlier in his lecture. That talk was a considerable embarrassment to me, because when I had written about three-quarters of it, which consisted of a sort of shake-round of various historical ideas I had picked up from sundry books, I realised that there were seven different ways of ending the paper, one for every day of the week. As the paper was given on a Tuesday, I naturally chose the Tuesday version. It was philosophically entirely unsound, and so were all the others.

I had to give the paper — I had committed myself — and it was duly printed, but that was the moment at which I stopped being an architectural propagandist and, indeed, an architectural critic at all. My frame of mind at that moment has been to some extent reflected in what Reyner Banham has been saying to-night. I thought, 'To hell with all this talk; it is no good. Either one knows or one does not know, and if one does not know, there is quite a possibility that one can find out.'

That rather optimistic thought was immediately succeeded by a thought which Reyner Banham has just used in his talk: there are too many imponderables. I do not for one moment believe that we can be encouraged by what Reyner Banham has said about the possibility of actually finding out how shapes and colours, and so on, affect people, of rationalising people's need from architecture. Alas, such is the complexity of the human personality that I do not think we can begin to rationalise in that way, and I am really rather surprised that Reyner Banham should suggest that we can.

I started writing down some of my objections. I did not get very far, because there was not much time. There are such imponderable things as the prevailing sense of novelty at any moment. People need design to change. Supposing we did arrive at something which was approved by all the scientists and the psychologists, somebody would at once want to do exactly the opposite, just for the sake of change.

Then, there is that curious thing which sometimes goes underground but pops up again continually, the devotion to antiquity. Antiquity may be Greece or Rome, or it may be art nouveau revival, but in any of the arts — and I think one must include architecture among the arts — there is always the sense of daring and of adventure, the sense of 'To hell with this. We will do the exact opposite.'

As long as architecture is affected by that kind of thought, I do not see that it is possible to hope for anything from such an approach as has been suggested tonight. At the same time, I enjoyed Reyner Banham's talk very much. I always enjoy his talks. They are refreshing and sensible. What he has said may go some way to getting rid of something for which I have a bright name which nobody else uses — that is, art worry.

There is an awful lot of art worry in the world and I get heartily sick of it. Last year, at dinner table conversation in Oxford, where I was supposed to be Slade Professor of Fine Art, I was driven by art worry to say that I had a horror of art. I am told that that has been echoing round Oxford ever since.

That is all I have to say. What I intended to do was to discourage Reyner Banham — one should always discourage him; it is good for him — and also to thank him quite sincerely for a splendid talk.

Mr. W. A. Eden

I should like to congratulate Dr. Banham on his excellent academic discourse. If anyone doubts that it was academic, I think I can prove that it was. For my authority, I propose to go to the founder of the academic tradition, the founder of the first academy of all, that which was inaugurated in about 385 BC in the grove (or park) near Athens, a grove sacred to the memory of Academus. This is what Plato has to say about the matter in his Seventh Letter, and I quote from the translation of the late Professor G. C. Field. The only way, he says, in which the ultimate truths of philosophy can be learned is, 'by devoting every effort and a great deal of time to them. All these different things must be, as it were, rubbed against each other, words and statements and visual images and sense perceptions; they must be tried and tested in friendly disputation by the ungrudging use of questions and answers. Only then, if even then, when the mind has been strained as far as is humanly possible, does the understanding of each thing shine out.'

So I must congratulate Dr. Banham for his academicism.

I should like also to congratulate him for being a very good Vitruvian. You remember what he said about the 50 million of them and the 18,000 of us. This is what Vitruvius has to say about the 50 million of them. All men, he says, and not only architects, can judge what is good. I think that is a true saying and one that it is very necessary for us as architects to consider, especially today. For that reason, it is extremely good for us to have come here and listened to what Dr. Banham has to say to us. I have thoroughly enjoyed every word he has uttered.

Before I sit down, there is one other thing concerning the question of theory and practice that Mr. Raymond Erith has raised. The interdependence of theory and practice is one of the main doctrines, if I may put it that way without offence, of Vitruvius; it is one of the things he has always insisted upon. Therefore, it would be much more appropriate if Dr. Banham's talk had been entitled 'Vitruvius, come home to these academies of architecture where we have to be academic.' It is the only way to proceed, whether we like it or not.

Mr. John Page

I, too, speak, like Dr. Banham, not as a member of the profession of architects, but as an outsider. I have come down from the North, where we are, perhaps, slightly more progressive in some ways in teaching architecture than in the South. I come from the University of Liverpool as a member of the Department of Building Science. It is my job, of course to try to interpret and communicate scientific knowledge to architectural students and also to people who come from everyday architectural life to attend courses in our department.

I am very glad to hear Dr. Banham's criticism of the present position of the profession, because I feel that the architect's opinion of his own achievement does not always line up very well with the beliefs held by the public at large.

During the movement which is labelled 'functionalism' we have seen a very large number of buildings that have functioned very much less well than the buildings that preceded them in the ages when the word 'functionalism' was unknown. I define functionalism as making something which has the appearance that its function is more important than the function which it should actually have. This kind of thing is very widespread. The worst case I have encountered of this nature was a hospital in West Africa, which had to be abandoned because it was too hot to work in. We have on all hands examples of buildings where we are getting failures by architects who are claiming to the

general public that their buildings should function better than the buildings of architects who have preceded them. Those of us who study factors like daylight, heating and ventilation, and so on, know that many of the earlier buildings - for example, the building in which we are now meeting - perform very much better than the buildings that we are being given today. This is a very serious matter indeed, because the architect's profession is, I am certain, beginning to lose the confidence of the public.

I hear the remarks of my colleagues in the engineering faculty, professors of one kind or another in the University. I hear various remarks from people outside. They are not happy about architecture at the moment. They cannot count on a member of the Royal Institute of British Architects being able to produce them a building which will look well.

I do not believe in the unique solution. I do not believe that by any amount of study there will emerge, to any one particular problem, one unique solution; but what I do believe is that every architect must have sufficient knowledge, when he proposes a solution, to know at least in broad outline by general principles that it will work. At the moment, this is not true.

Obviously, it will take a long time to correct these deficiencies in knowledge to produce a change in attitude towards the techniques designed, to produce a realisation that perhaps the field of knowledge embraced by the contemporary architect is too broad, that some specialisation is needed. The profession must soon face up to the question of specialisation, because it is one thing to be able to design a two-storey house; it is another thing to be able to turn from a twenty-storey block of flats one day to a complicated modern hospital the second day and an industrial building on the third day. In all the major professions except architecture we have seen a degree of specialisation, and this has not come about in architecture. This position is defended by architects because they believe that something essential will be lost.

I feel passionately for architecture. It is important that the buildings we produce should be fine buildings that symbolise the best in our civilisation, but I cannot believe that this will be achieved by spreading ourselves over such a wide field.

I felt that the title of Dr. Banham's address was most unfortunate, because in the train coming down from Liverpool today I read through my Vitruvius. Of the chapters in Vitruvius, at least three-quarters deal with function. I wrote out a list for Dr. Banham in case he had not looked at them recently.

Book One started off as an excellent reminder on the training of architects. Book Two is concerned entirely with building materials. There is a section in Books Three and Four with which we are all familiar - the planning of temples, and so on. Then, it returns to theatres and acoustics. There is a good chapter on climate in architecture. We have seen many buildings which are built today, in various parts of the world, by British architects which are quite unsuitable for the climate. Book Seven, dealing with finishes, paints, and so on, is an excellent chapter on getting finishes on to surfaces that move. There is a chapter on finding water and water supplies. Book Nine deals with astronomy and the movements of the sun, which come in useful, in sun control. Finally, Book Ten deals with machines and building operations. To say, Vitruvius go home is wrong. I say to Dr. Banham, Go home and read Vitruvius.

Dr. Ove Arup

I must confess that Dr. Banham's address was a triumph of mind over matter, and I really could not quite understand it. Naturally, Dr. Banham started by trying to show that architecture is in a bad way. Every young architect who wants to be considered a genius in disguise, or anybody who wants to be a critic or to be considered a prophet or creator, must start from that assumption.

I do not think that architecture is at present in a particularly worse state than it was twenty years ago - I think it is much better; but still, it is in a bad state.

What is the diagnosis? In what way is it bad? I did not quite find out what was wrong, but apparently one thing which was wrong was, first of all, the formalistic approach on the part of Vitruvius, which I think, is probably bad. On the other hand, I do not think it is as extremely important as reasons of structure, and so on.

Dr. Banham was concerned that architects should be convinced modernists. Exactly what that means, I do not know. What exactly he has been speaking about, I do not know. Also, when we come to the remedies, we are told that these are more scientific knowledge and experiment. Sir John Summerson disposed of that, quite rightly.

It is quite wrong to say that scientific knowledge can put everything right. One would get bored and tired of it. I do not know whether it has something to do with Dr. Banham not having created any architecture himself. If he had, if he knew the sort of creative

process. I think it is quite obvious that one knows when there is something wrong and one tries to bring in some order. It is not anything to do with science. You must get the science correct and use science; you must find about the conditions and know that there is the danger of designing things without skill and not knowing what to do about it.

That is a grave matter and indicates a serious fault which must be remedied. But nobody would defend it. Nobody would say that a building which did not work was a good building. It is not a theory of architecture to build buildings like that. It is just that people are not as good or as clever as they ought to be.

I do not believe in any theories of architecture. I have seen many architects and have worked with many different architects, and I always get these pronouncements. They try to explain why a structure must express something or must show or hide its form. It all depends which architect one is talking to.

You can make good architecture according to almost any theory if you follow it logically, if there is unity in the conception. But there must be a form of emotion. If you are designing a door handle or any little thing, you might say at the first attempt that it is not good enough and you try again. There is something inside you striving for it.

This business of going out and asking people or finding out what they need is a fantastic way. It is not what they say they want. It is just what the architect thinks they want.

How do we do that? I would like Dr. Banham to explain. First, you must go into the whole matter of philosophy, religion, values and things like that.

We have had a very amusing talk.

Mr. J. M. Richards

I feel obliged to say something to earn my enjoyable meal and I shall at least begin by doing the very thing I always despise after dinner speakers for doing, namely, tell a story. But unlike the usual after-dinner story, instead of being a funny one, it is tragic and one of the saddest stories I know. It is about a friend of mine who was going on a railway journey and got into a train at Paddington. He settled himself down into a corner seat. Opposite him was a middle-aged lady, dressed all in black, obvious-

ly a widow, settling herself in the corner seat. He watched her put her luggage on the rack and pull down a thick inflatable air cushion on to the seat. She sat down on it and, to his horror, as she sat down, he heard a loud hissing noise of air and watched her subside. He was embarrassed. To his distress, instead of seeing her irritated, he saw her terribly unhappy and she burst into tears. He thought he should do something about it, but she would not be consoled. He said, 'Can I help at all? I am sure it can be mended.' She replied, 'That is not the problem.' He was impatient and asked 'What is the problem?' She replied, 'It was my late husband's breath.'

I have listened attentively to Dr. Banham and I meant to point out the exact relevance of that story to his thesis. I need merely say that my friend in the opposite corner was an architect and Vitruvius had gone home. Combining the academic and the scientific approach, the answer was difficult to find. All I need hardly say is that that episode occurred many years ago when trains were still of that particular kind and when air cushions were made of that particular material. Now, the problem is very different.

I now go on, like Dr. Banham did, to try to analyse what the problem is and how one should approach it. Much though I enjoyed his first analysis, I felt a little defeated looking at it from the consumer's point of view and I would associate myself closely with Dr. Arup's objection to the assumption that the analysis of needs leads to the answer. In fact, I was rather surprised that Dr. Banham seemed to regard the analysis of needs and the analysis of what people want as more or less interchangeable. Of course, they are exactly the opposite.

It is the bad architects who think that if you decide what people need, your next duty is to give it to them irrespective of what they want and that the architect's role is to persuade people to want what he thinks they need. That is untrue. It is the non-architect - the speculative builder and the entrepreneur - who are interested only in what people want, which is not the same as what they need. The architectural role is to find the common factor between the two.

After all, what people want is entirely conditioned by what they know they can have. That is what the architect has to find his way towards. In relation to what he thinks people should need, he should be always aware - this is where I, as another consumer, side with Dr. Banham - of not what they

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"REBUILDING OF THE CITY OF LONDON AFTER WAR DAMAGE
AND
AND UNDER THE NEW TOWN PLANNING LAW"

BY DESMOND HEAP

(An address by Desmond Heap, LL.M., P.P.T.P.I., Comptroller and City Solicitor to the Corporation of the City of London, given recently at the Architectural League of New York. Mr. Heap is past president of the Town Planning Institute, member of the Council of the Law Society and of the Royal Institute of Chartered Surveyors.)

In this talk the City of London to which I am referring is the ancient City of London whose boundaries have not altered materially since the time of the Norman Conquest, and which, to this day, includes a comparatively small area of 677 acres forming the heart of the metropolis. In other words, I refer to the unique square mile based on Guildhall, the Mansion House and the Bank of England, the area presided over by the Court of Common Council and also by the Lord Mayor in his capacity as head of the Corporation of the City of London.

Throughout the centuries legislative changes have not greatly affected the Government of the City of London and to this day, in England, no other municipal body shares the traditions and peculiar dignity of the Corporation of London.

The rebuilding of the City of London after the devastations of the second World War have often been compared unfavourably with the rebuilding that followed the Great Fire of 1666.

The total acreage of the City is approximately 677 acres and the Great Fire of 1666 destroyed 437 acres, or about two-thirds of the City, including old St. Paul's Cathedral, 87 Churches, 42 Livery Halls, public buildings, one-third of London Bridge and about 13,000 houses. The monetary loss was, in those days, about £10,000,000.

In the second World War the destruction of the City from enemy action amounted to 223 acres, or approximately one-third of the City, but owing to the greater height and size of buildings the loss of floor space was considerably greater than that sustained in the Great Fire of 1666. Out of a total floor space in the City in 1939 of 84,000,000 square feet 28,000,000 square feet was lost by war damage, which produced a loss of £2,000,000 per annum in rateable value. The cost of the

replacement of this war damage is in the vicinity of £100,000,000.

During the Second World War 417 explosives, 2,498 oil bombs, 13 land mines and thousands of incendiary bombs were dropped upon the famous square mile of the City of London, obliterating, as has been stated, about one-third of the City.

There were 47 Churches in the City, most of them of Wren architecture. Not one of them escaped damage. Several were totally destroyed or burnt out, many severely damaged, and the rest sustained structural injury. 28 of the 47 have been restored and are in use.

On the outbreak of War there were 36 City Livery Company Halls, and of these 18 were destroyed, but all of them have now been, or are being, replaced.

The rebuilding of the City of London after the bomb damage of the second World War took a great deal longer than the rebuilding that followed the Great Fire of 1666, but it must be remembered that the Great Fire was confined to the City of London alone, whilst war damage not only extended over the whole of the City, but also to some thirty other cities in England and Wales.

Within a few days of the Great Fire of 1666, plans on which Sir Christopher Wren had been working since 1659 were produced, but they were never carried into effect, owing to survey difficulties. There were no deeds, no estate plans, and the characteristic feature of the times was that every man started to build on his own site. In short, there was no comprehensive re-development of the City, although it was rebuilt with wider streets and the buildings were erected with fire-resisting materials.

The general rebuilding was nearing completion

within ten years of the Great Fire of 1666, although St. Paul's Cathedral took 25 years more, that is to say 35 years in all.

There is no doubt that the rebuilding of the City of London after the second World War has progressed at a much smaller pace, but one hopes, to a more orderly and beneficial result; the salient distinction between 1660 and 1960 being that, whereas after the earlier conflagration there was piecemeal development, after the second World War every endeavour has been made to secure development on a comprehensive basis, and in accordance with one pre-conceived plan functioning for the betterment of the City as a whole. This important and dramatic change in procedure was brought about solely by the incidence of town planning legislation, legislation which had begun in England in 1909 but did not really come to have any drastic effect until 1943, when it became clear to England as a whole that after the bomb devastations of 1940, 1941 and 1942, a new legalistic approach would have to be made to the re-development of bomb devastated cities if any sort of order was going to be brought out of the chaos of war.

Whilst town planning legislation can be criticized and attacked by those who are antipathetic to it, one shudders to think what might have happened if there had been no comprehensive control over the redevelopment of the City of London after the bomb damage of the last War.

A modest amount of control was conferred by the Town and Country Planning (Interim Development) Act, 1943, but it was not until the really monumental Act of Parliament, namely The Town and Country Planning Act, 1947, came along that town planning control really came into its own. The 1947 Act was, quite frankly, the first Act to put real teeth into the story of town and country planning, and one of its outstanding features was its provision that, as from July 1st, 1948, there should be no development or re-development of any land anywhere in the country without town planning permission first being obtained. Such permission is given in the City of London by the Corporation of the City of London, is subject to the approval of the London County Council, and it is given always in accordance with the pre-conceived plan designed to cover the whole of the City of London.

The result has been that no one part of this very special and peculiar square mile comprising the very heart of the City of London has been developed without reference to the other parts of the square mile and, indeed, without reference to what was

going on outside the square mile.

It was shortly after midnight on August 24th, 1940, about the time when the decisive aerial battle, known as the Battle of Britain, was being fought out in the air above London and the South-East corner of England, that the first bomb fell on the City of London.

After the aerial battle had concluded, and the prospect of land invasion had at least temporarily fallen into the background, the aerial bombardment of London was "hotted up", with increasing severity throughout the latter part of 1940 and the beginning of 1941, and the climax of it all is illustrated in the now famous picture of the dome of St. Paul's Cathedral suffused in flame and smoke during the early hours of Sunday morning, December 29th, 1940. I hope to show you a picture of this later on, and you will probably agree with me that, in the circumstances, it was a miracle that the Cathedral came to be preserved. It is indeed no exaggeration to say that the fact that the Cathedral was preserved under such devastating circumstances came to be a matter of inspiration for those who had the responsibility of rebuilding the City of London.

The Corporation of London came to the conclusion that only a comprehensive plan for the whole of the City would meet the challenge of the war damage which had occurred, and such a comprehensive plan was prepared by the late Dr. Holden and Professor Sir William Holford. This plan was published in 1947, even before the enactment of the famous Town and Country Planning Act, of that year, an Act on which the comprehensive plan depended for its successful carrying out.

Town planning and comprehensive development are living and developing things, but though the Holden-Holford plan for the City has been considerably modified, its main principles were included in the development plan for the County of London when it came to be met in 1951 with the provisions of the Town and Country Planning Act, 1947. The Development Plan has many outstanding features which should have a great influence on the rebuilding of the City.

(1) Many new roads and widenings, traffic islands and diversions are proposed to help solve the traffic problem.

(2) A considerably enlarged precinct around St. Paul's Cathedral is provided, and the redevelopment of the much discussed Barbican area by a Particularly comprehensive scheme of redevelopment known as the Barbican Scheme has attracted

much international attention.

(3) A system of multi storey car parks on the perimeter of the City is provided for.

(4) Preservation of buildings of architectural and historical importance has not been neglected, and many have been allowed to remain in sites while road widenings have been carried out, the widening of the carriageway for vehicular traffic being secured by arcading for pedestrian traffic, the ground floor of these special buildings.

(5) The exposing in many places of the Roman Mediaeval Wall of the City has been secured, and many small open spaces are planned here and there at strategic points in the City.

(6) On the technical side a new method of calculating the permissible amount of cover on a building site has been adopted, resulting, generally, in a building floor space equal to five times the site area, irrespective of the height. The purpose of this is to encourage pyramidal buildings instead of uniform building in horizontal lines, thus providing improved light and air.

The total floor space to be provided under this comprehensive plan for the City is designed to be much the same that existed before the War, but in a greatly improved layout.

Times, however, change, and it is to be noted that in the new City of London there will be more office space and less warehouse space. Indeed, there is to be a good deal less warehousing in the City of London where land is expensive, the rebuilt warehouses being sited elsewhere on less expensive land, and mere samples retained at offices within the City from which buyers can make their selections.

Rebuilding started slowly in the City of London because after the war first priority in England as a whole, was for the re-housing of people who had lost their homes, followed by schools, hospitals and factories. The replacement of office accommodation, on the other hand, was strictly controlled by the issue of building licences. Indeed, it was not until 1954 that the rebuilding of many of the offices in the City of London really got going.

How has comprehensive redevelopment been secured in a City where there was a very high multiplicity of ownership? It has been done through the medium of compulsory purchase,

under the authority of a Declaratory Order made by the Corporation of London under the Town and Country Planning Act, 1944, an Act which, first emphasized and embraced the ideal of comprehensive development thereby paving the way for the more monumental enactment of 1947.

It was the devastation of the bomb, not only in London, but in other great cities, where large areas were laid waste - Birmingham, Manchester, Liverpool, Hull, Bristol, Glasgow, Southampton and many others - which really brought home to England the need for redevelopment on a comprehensive scale.

Accordingly, under the City of London Declaratory Order, 1948, the Corporation, with the approval of the Minister of Town and Country Planning, obtained potential compulsory purchase powers over 230 acres of land, almost one third of the City. Under the general aegis of this Declaratory Order the Corporation have made, from time to time since 1948, various individual Compulsory Purchase Orders.

The total number of Compulsory Purchase Orders so far made amounts to 20, as a result of which the Corporation have been able to form 31 redevelopment units comprising 100 acres, about half the land in the Declaratory Order. Land in a redevelopment Unit comprises land already purchased and land yet to be purchased.

The acquisition of land has, so far, cost the Corporation almost £ 23,000,000 in purchase money, legal costs, surveyors' fees, stamp duty and land registry fees. This works out at about £ 200,000 per acre on average. This is the price paid in the last 10 years. This price is likely to increase greatly during the next ten years because of (a) the general rise in land prices (b) the growing need to buy land with standing but obsolete buildings upon it and in respect of which no war damage value payment or cost of work payment (under the War Damage Acts, 1939-1943) will be available to the Corporation, the buildings being obsolete but in the main not war damaged. Further land is being purchased at the present time.

Having acquired the fee simple in the land, the policy of the Corporation has been to lease the land back to developers for periods of approximately 99 years, subject to the land being developed with town planning permission in accordance with the provisions of the Development Plan for the City, and of such other conditions as the Corporation thinks fit to impose in the interests

of sound comprehensive redevelopment. The object of this policy is firstly to ensure that redevelopment is carried out in suitable blocks, instead of merely on the undivided sites of previous owners, many of which sites were awkward or too small to carry any modern building, and secondly, to give the Corporation some recoupment for the cost of land which they have to buy for road widening and other public purposes.

If, on the one hand, it has cost the Corporation £23,000,000 to acquire land in the City, that land, having been leased to developers at ground rents, is now bringing in to the Corporation, by way of return, an amount of over £250,000 per annum.

At the end of the 99 year lease the land will again fall into the possession of the Corporation of London, ready for redevelopment in accordance with what are thought to be the latest concepts of town planning in 100 years time.

It will be noted that by adopting the practice of not disposing of the freehold of any land which they compulsorily acquire, the Corporation will not have the necessity, in 100 years time, of having to purchase the land over again. In the meantime, the Corporation remains the freehold-

er of the land on which redevelopment takes place, and the redevelopment itself is carried out by developers to whom the Corporation grants a 99 year lease.

This procedure also enables the Corporation to have an even stricter control over redevelopment than it would if it had to rely merely on the provisions of the town planning acts, because in granting a building lease the Corporation can and does incorporate a detailed provision covering the style and manner of redevelopment provisions which could hardly be imposed under the general law of letting town planning.

The Corporation thus, in the redevelopment of the City, gets not merely town planning control over land, but also landlord and tenant control through the medium of the 99 year building lease that the Corporation grants.

The total loss of floor space by war damage amounting to 28,000,000 square feet, 14,000,000 has been replaced, leaving 14,000,000 more to be replaced before the total pre-war floor space has been recovered, although the war damage loss of 28,000,000 square feet of floor space has only been half replaced up to date, the £2,000,000 rateable value lost by war damage has already been slightly more than replaced.

Year	Actual Rateable Value	Rateable Value in Column (2) adjusted to allow for changes in the basis of valuation	Percentage of Column (3) to Pre-War total, taking pre-war figure as 100%
1.	2.	3.	4.
	£	£	
Pre-War	8,200,000	8,200,000	100 %
1944	6,200,000	6,200,000	75 %
1955	7,000,000	7,000,000	85%
1958	12,000,000	7,500,000	90 %
(revaluation 1.4.56)			
1959	12,750,000	8,000,000	97%
1960	13,500,000	8,300,000	101 %

(These values are not readily comprehended due to difference in exchange ; a £ is equivalent to \$2.80, but this figure does not reflect the relative buying power of the English and American currencies.)

Rebuilding has not meant a mere replacement of buildings demolished. The City in its new form is being shaped to meet modern requirements, with new main arteries and a general widening of roads to meet modern traffic needs, increased open space, and the provision of car parking space in the curtilage

of new buildings. In spite of these provisions equivalent rateable value has already been reproduced, because rents, which govern rateable value, have increased very substantially. (Better building, lighting, reshape blocks.) The continuation of rebuilding will add to the total rateable value for many

years yet and will serve to keep the annual rates levied in the City to a minimum.

Rebuilding, however, is only being carried out by placing a financial burden upon the ratepayers. Local authorities in England borrow money with repayment by instalments over a period of years or in full at maturity, to meet their capital requirements. During the post war period the City of London has already borrowed £ 21, 000, 000 to pay for the acquisition of land for redevelopment. Outgoings to meet the interest and provide for eventual repayment of this large capital sum amount to about £ 1, 000, 000 each year. This sum is not all lost to the City ratepayer, however. As already stated the policy has been to acquire freehold rights of land within the areas scheduled for redevelopment, and, having cleared the land, it is leased to a developer willing to carry out redevelopment at a ground rent upon long lease. Although re-

development is often a long process, particularly where compulsory powers have to be exercised, ground rents of about £ 250, 000 are now being received each year, and this figure will increase in the near future as further sites become available for leasing. The Government also pays its share towards the losses of the City in this field and this year will pay about £ 250, 000 to the Corporation. In spite of these returns, however, an annual charge of about £ 500, 000 remains to be met out of the pockets of the ratepayers of the City of London, and it is a matter for argument as to how far the ratepayers of to-day shall be required to spend out money for the benefit of the ratepayers of tomorrow.

The following details of progressive capital expenditure on town planning in the City of London show how the plan for the rebuilding of the City has progressed:

Year	Capital Expenditure in the year.	Cumulative total of Capital Expenditure to end of year.
1.	2.	3.
	£	£
1950	1,500,000	1,500,000
1951	1,500,000	3,000,000
1952	2,250,000	5,250,000
1953	2,500,000	7,750,000
1954	2,250,000	10,000,000
1955	2,500,000	12,500,000
1956	3,500,000	16,000,000
1957	1,250,000	17,250,000
1958	1,500,000	18,750,000
1959	1,250,000	20,000,000

It may be inferred that in the City of London the peak period of capital spending in the acquisition of land has been passed, but much remains to be done. A large proportion of the areas of extensive war damage have been purchased and made ready for redevelopment, leaving areas next to be dealt with which are not solely areas of war damage, but must nevertheless be dealt with, partly to provide new main highways and partly to replace old and out of date buildings. In these further ventures, if they are proceeded with, the City Corporation will stand to bear the whole loss, as grants out of Government funds are confined to losses sustained in the redevelopment of areas of extensive war damage.

The policy of a grant scale of compulsory purchase to which I referred of course commits the Corporation

to become a land owner on a large scale, a roll to which at least, in its capacity as a modern local authority, it has not hitherto generally been accustomed.

The Corporation has declared, however, as a matter of policy, that it will not unnecessarily or capriciously buy up land, and that it is willing that any land owner should himself execute a scheme of redevelopment, if he is in a position to carry it out in accordance with the Development Plan for the City, provided always that as a result of the Corporation refraining from compulsory purchase, the Corporation will be no worse off financially than it would have been if it had compulsorily acquired the land itself and then let it on a building lease for redevelopment.

Having dealt generally with the redevelopment of the

City of London, there are three particular schemes to which I would make special reference:-

LONDON WALL.

Among the major post-war works in the City has been the construction of the first section of a new west to east traffic route known as Route 11, and now officially named "London Wall". This has cost, with the acquisition of land, almost £ 1,000,000 (£ 968,100). It contains a dual carriageway roadway having an overall width of 86 feet and comprising two 29 feet carriage-ways with a 4' central reservation and two 12' footways the total length being approximately 1,900 feet. Beneath it is a public car park with accommodation approximately for 250 cars. The cost of the construction of the car park was £ 350,000.

ST. PAUL'S.

The general conception of the scheme is that St. Paul's being a metropolitan cathedral should not stand isolated in a wide open space, but should arise with majestic grandeur from its surrounding commercial buildings. The proposal, therefore, is to form a series of small open spaces, and pedestrian ways, thus giving unexpected and dramatic views of the Cathedral. The layout is rectangular with the axis of the Cathedral, and with a variation of heights for new buildings gives a skyline that will enhance the beauty of the ares.

SEGREGATION OF PEDESTRIANS AND VEHICULAR TRAFFIC

The scheme also provides for the diversion of traffic along Carter Lane to Ludgate Circus, thus leaving the Precinct of St. Paul's mainly a pedestrian area, vehicular traffic approaching St. Paul's only on ceremonial occasions. As far as the buildings

themselves are concerned, they are to be designed on modern lines, thus reflecting the age in which we live, rather than a slavish copy of the Renaissance. It is anticipated that rebuilding north of the Cathedral should commence during 1960.

BARBICAN

The Barbican has had a chequered career. Originally an area of narrow ill planned roads and lanes lined with congested commercial buildings, offices, warehouses and light industrial buildings connected with the textile trade, which was almost entirely burnt out on December the 26th and 27th, 1940, giving a wonderful opportunity for replanning.

The new main thoroughfare, London Wall, to which I have referred passes along one edge of the Barbican area.

The Barbican area on the north side of the City was the largest separate area laid waste by enemy action, and, contrary to its usual practice of acquiring the land and then letting it on long lease to a private developer, the Corporation is now in the process of acquiring all the land in the area so that it can carry out redevelopment to create a residential precinct in the area under the Town and Country Planning Act of 1944 - positive development. The City of London is primarily a place of business and commerce, but the members of the Corporation, with the full support of the Government, have decided that commerce should not be allowed to oust residential development entirely from the City. A plan to create a high class residential area has been prepared and approved by the Corporation at a total cost of about £20,000,000, and it is hoped that this will serve to restore a certain residential neighborhood to the central areas, not only of the City of London, but as an example to be followed in other great cities in the country.

HERE and THERE from EDITOR'S DESK

Thonet Industries producers of furniture for Corbusier, Breuer and others sent us a catalogue showing samples of recent work, mostly in wood. Their designs are well worth a look.

Bel-Air Industries sent information on their floor design for rooms containing electronic computers. Another reminder of changing forms to suit the electronic age.

Professor Tunnard head of the Yale University's Graduate Program in City Planning proclaimed in Tokyo that "By the year 2000 the United States will have wasted 16 million acres of land in haphazard wasteful planning for the huge growth of American cities." This fact is painfully obvious to those who study town planning and most town planners know how this could be avoided. What to do is no longer the problem, the problem is how to get it done in the face of public, not apathy,

but complete lack of knowledge of the subject and its seriousness.

"Creativity Linked to Free Thinking By University of Michigan Designer" is the headline of a press release sent to us. Surely this is a platitude of the first water. The designer then goes on to say competition cannot bring about creativity but co-operation can. More poppy-cock. In a recent article a renowned artist stated creativity just happens sometimes - it is there and sometimes it is not, and there is very little you can do about it. This seems to sum up the opinion of a number of famous artists. The creativity is in each case linked with a very thorough knowledge of the craft whether it be painting, sculpture, literature, architecture or any other good artist.

The Great somehow find time to do the right thing. The BULLETIN recently wrote to a number of the United States leading architects, and almost all wrote us a very charming reply. In particular, Ed Stone whose delightful article you read in our last number and Pietro Belluschi who hopes to give permission to reproduce an article he is doing for the Saturday Evening Post. He also forwarded an excellent booklet on M.I.T.'s Architectural School which would interest anyone planning an architectural career.

(continued from page 16)

want, but what they would want if they knew the architect was capable of providing it. That, surely, is the architect's whole role, to show people what they could have if only they had the sense to ask for it.

I enjoyed Dr. Banham's talk more than I can say, even though I did not understand all of it.

Dr. Banham

In response to the number of very distinguished opinions which have been offered, I would like to touch on only two points: i.e., first, the problem of the analysis of needs and wants, which is one of the great problems of architecture at the moment; and secondly, the status of Vitruvius himself.

To take the first thing first, one has to be a very bold man or a very sure man to claim to be able to distinguish between needs and wants. The whole growth

Dow Chemical have published an informative booklet on hyperbolic paraboloids using styrofoam units supported on stressed wires. A method which reduces form work costs, one of the drawbacks of the paraboloid roof.

Material Service Foundation Fellowship - the fellowship yields the sum of \$2500 towards expenses of graduate study abroad. Application blanks are available for 1961-62 from the Chicago Chapter AIA, 221 North LaSalle Street, Chicago 1, Illinois.

Student Financial Aid by Homer D. Babbidge, Jr. deals with its subject from the point of view of the college and appears to cover its field well. Price \$1.50; available from American Personnel & Guidance Association, 1605 New Hampshire Avenue, N.W. Washington 9, D.C.

France Actuelle last August had some interesting things to say about urban planning developments in Paris. The developments are considerable.

The developments indicate a public awareness of the problems which bear out the belief of most European experts that public awareness in the United States is twenty to thirty years behind in this field. A belief further borne out by a press release on a redevelopment of 38 acres in a large city like Minneapolis, claiming the title of Urban Renewal when in fact such a spot development could complicate further plans.

of civilisation, at least in its material aspects has proceeded on the assumption that people need what they want, that if they want certain things they find ways of going out and getting them, and that the various technologists who wait on the consumer have to find ways of providing the things. Examples are available and I will not pursue them here but that is how things have proceeded.

Speaking purely as a consumer, I am extremely suspicious of the man who proposes to tell me what I want, or even the man who proposes to find out what I want and produces answers contradictory to what I think I want. But this is a situation which can be resolved pragmatically. An increasing number of techniques are available, though many of them are regarded as disreputable because they have been designed for commercial purposes.

It is all very well for distinguished persons at this table to tell me that there are too many imponderables

I want to know how many too many imponderables there are and who will get in and find out what the imponderables are. I know there are a great many imponderables, but most people cannot tell me what they are because no one has gone out of his way to find out.

I take my stand again on the need for objective research. If it is bad for people to be given everything they want, I want to be shown how bad it is and why it is bad. As a consumer, I am a little tired of being told, a little tired of being manipulated by the techniques of non-motivational no-research used by architects. That is to say, I have to put up with their products, because they have not even consulted me in the first place as to what I need.

I consider again that there must be more research. It must be more objective. You will not necessarily produce great architects, I agree. There still must be the Charles Eames or someone like that who resolves the information into a comprehensible or usable object, be it a chair or a building. But I required to know that the man offering me such a building or object has found out all about the problem facing him.

I knew that I should be driven into the ground with academic Vitruvius-type flattery. It has been extremely well done, and at some other time, I should like to take up the two different meanings of the word 'academic'

which have been slipped over each other tonight.

Simply about Vitruvius, what John Page said is correct. Vitruvius was in his time a great functionalist. Vitruvius, in fact, like so many of the great thinkers of antiquity, sat right on top of the technology and science of his time. He did not reject the science of his time. He lived, lucky man, in a period when there was virtually no working split between science and aesthetics. The position he took was then an entirely correct one. His reliance on the Hippocratic body of Greek medicine, and so on, is a lesson to all architects today - although not to rely on the Hippocratic body of medicine, but on the body of modern medicine as it now exists.

To emulate Vitruvius as a solid functionalist should be the aim, rather than merely to parrot Vitruvius' opinions and those opinions which he produced on the basis of the new facts which then were available.

Let us face it. It was easy for a man like Leonardo da Vinci to be a universal man because there was not very much to know in those days. The sciences were in a poverty-stricken condition. They are not so now.

John Page says that there must be specialisation, but I would like to feel that within any particular branch of architectural specialisation an architect was as much in command of the scientific knowledge of our day as Vitruvius was in command of the scientific knowledge of his day.

SPECIAL FEATURE IN NEXT ISSUE

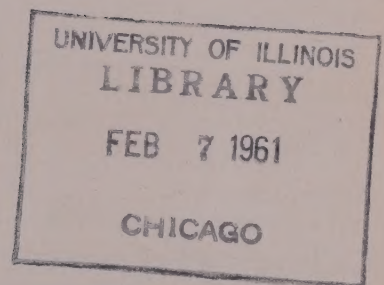
An article by Richard J. Neutra, Fellow of the American Institute of Architects. The subject of the article is "Career of the Future Architect".

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